

MECHANIC STUDY GUIDE

Engine Repair - Diesel

Heavy Duty Trucks

Listed below are a number of items and subjects which make up the mechanic certification tests identified above. An individual's ability to pass the certification test will depend upon the amount of knowledge the person has concerning these items:

Engine Components - 24%

Detroit blower rotor clearance adjustment
Piston rings
Piston ring grooves
After cooling - benefits
Bolt grade recognition
Lube oil coolers
Turbo charger operation
Valve bridge function

Diagnosis - 34%

Turbo problem diagnosis
Coolant in crankcase
Smoke problem diagnosis
Engine operating temperature
Low oil pressure
Engine tear-down diagnosis
Blow-by
Crankshaft diagnosis
Engine Miss

Lube & Fuel - 10%

Direct injection
Leaky fuel lines
Restarting an engine that has run out of fuel
Fuel Filters

Skills In Measuring - 12%

Tools for measuring
Plastigage reading
Cylinder taper
Reading a micrometer
Crankshaft End-play

Miscellaneous - 20%

Using a vacuum gauge
fuel shut-off solenoid
Idle speed
Detroit diesel R.P.M. setting
Understanding 2-stroke, 4-stroke engines
Valve seat width
Valve lash adjustment
Overheating

SAMPLE QUESTION:

A diesel engine misses at all speeds and there is a puff of smoke when it misfires. What is the most likely cause of this problem?

- A. Erratic governor action.
- B. Stale fuel.
- C. A miscalibrated pump.
- D. A sticking nozzle.

ANSWER: D